REMARKS

Favorable reconsideration and allowance of the subject application are respectfully requested. Claims 1-6 are pending in the present application, with claims 1-3 being independent. Claims 2-6 have been added by this amendment, which do not add any new subject matter.

Specification

The Examiner objected to the specification because of improper arrangement. Applicant submits herewith a substitute specification, placing the present application into proper U.S. form. The substitute specification does not add any new subject matter.

Claim Rejections Under 35 U.S.C. §112

The Examiner rejected claim 1 under 35 U.S.C. §112, second paragraph. This rejection is respectfully traversed.

Applicant has amended claim 1, in an effort to place the claim into proper U.S. form. This amendment does not change the scope of the claim, nor has it been made to overcome any prior art.

Claim Rejections Under 35 U.S.C. §103

The Examiner rejected claim 1 under 35 U.S.C. §103(a) as being

unpatentable over *Dureau* et al. (US Patent No. 6,118,472) in view of *Detwiler* et al. (US Patent No. 5,825,814). This rejection is respectfully traversed.

Independent claim 1 is directed to a system for transmission of data to requesting users over a wideband satellite transmission channel. For requesting the data, the users are connected to a base station via a shortwave radio path for transmitting data according to the TCP/IP protocol.

Applicant respectfully submits that the cited references, *Dureau* et al. or *Detwiler* et al., either alone or in combination, fail to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion of motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference must teach or suggest all the claim limitations, see *In re Vaeck,* 947 F.2d 48, 20 USPQ2d 1438 (Fed.Cir.1991).

The Examiner acknowledges on page 5 of the Office Action that Dureau et al. does not specifically teach that the connection to the Internet is via a shortwave radio path for transmitting data

according to the TCP/IP protocol. The Examiner then alleges that "it is well known in the art to use wireless TCP/IP transmission."

Applicant respectfully submits that *Dureau* et al. provides absolutely no suggestion or motivation to modify the reference or to combine the reference teachings, in order to provide that the users are connected to a base station via a shortwave radio path for transmitting data according to the TCP/IP protocol in order to request data, as recited in independent claim 1. The Examiner then alleges that *Detwiler* et al. teaches a radio communication system that connects to the Internet using HF/MF frequencies. Because *Dureau* et al. fails to make any mention that a user terminal, for example the end user 14, requests data from a base station, for example the service provider 13, via a shortwave radio path, the combination of *Dureau* et al. with *Detwiler* et al. is improper.

Furthermore, the Examiner's allegation, in rejecting claim 1 under 35 U.S.C. §103, that "it is well known in the art to use wireless TCP/IP transmission" is not a proper basis to substantiate an obviousness rejection.

Recent Federal Circuit case law precedent, discussed further below, makes it explicitly clear that the factual question of motivation is material to patentability and cannot be resolved on subjective belief and unknown authority, but must be read on the objective evidence of the record. Federal Circuit case law precedent

further requires that "common sense and common knowledge" alone is improper evidence in support of an obviousness rejection.

The Examiner purports a common sense and common knowledge reason for the deficiencies of *Dureau* et al., in other words, stating that *Dureau* et al. would have suggested a similar technique. However, common sense and knowledge are not objective evidence of record, as the Federal Circuit explains, but are in fact commensurate with subjective belief and unknown authority. Therefore, the Examiner has failed to meet the legal requirements to substantiate the obviousness rejection.

For an illuminating discussion on the burden placed on an Examiner to establish objective factual findings of record, the Examiner is referred to the recent Federal Circuit decision of *In re Lee, 61* USPQ2d 1430 (CAFC 2002).

In re Lee involved an appeal of a decision of the Board of Patent Appeals in which *Lee* argued that the Examiner failed to provide a source of a teaching, suggestion, or motivation to combine the applied prior art to arrive at the claimed invention. The Board responded to these arguments by ruling that "[t]he conclusion of obviousness may be made from common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference." Id. at 1432. The Federal Circuit overturned the Board's decision "for

failure to meet the adjudicative standards for review under the administrative procedure act." *Id.* at *1431*. The Federal Circuit further stated that "the factual inquiry whether to combine references must be thorough and searching... it must be based on objective evidence of record...[t]his precedent has been reinforced in a myriad of decisions and cannot be dispensed with." *Id.* at *1433*. The Court also stated that the USPTO is "not free to refuse to follow Circuit precedent" and "cannot rely on conclusionary statements when dealing with particular combinations of prior art and specific claims." *Id.* at *1434*

As stated herein above, the Examiner's asserted modification for *Dureau* et al., which is to provide a connection to the Internet by a short-wave transmission path according to the TCP/IP protocol, and the lack of factual support thereof comports very closely to the analysis disapproved by the Federal Circuit in *In re Lee*. As such, the Examiner's failure to provide factual support for a teaching, suggestion or motivation to modify *Dureau* et al. constitutes legal error. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Lastly, added claims 2-6 should be considered allowable at least for the same reasons present for independent claim 1. In other words, the cited prior art, either alone or in combination,

fails to teach or suggest that a user terminal requests data by short-wave transmission and receives the requested data by satellite transmission.

Conclusion

In view of the above amendments and remarks, this application appears to be in condition for allowance and the Examiner is, therefore, requested to reexamine the application and pass the claims to issue.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Martin Geissler (Reg. 51,011) at telephone number (703) 205-8000, which is located in the Washington, DC area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees

required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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JTE/MRG:tm
4100-0104P

Attachment: Substitute Specification
Marked-Up Original Specification

Part of Paper #6

Application No. 09/486,763

MARKED-UP ORIGINAL SPECIFICATION

Data Transmission System Based on Combined Shortwave-Satellite Transmission

This **nonprovisional application is a continuation of PCT/EP98/04700 under §371, and claims priority under 35 U.S.C. §119(a) on German Patent Application No. 197 45 573.5 filed in Germany on October 15, 1997, which is herein incorporated by reference.**

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a system for transmitting information to a user via a wideband satellite transmission channel in broadcast operation.

2. Description of the Background Art

A system of this type is known (Connect magazine, July 1997, p. 74). With this system, information, from the Internet for example, can be transmitted to users very rapidly at high transmission rates. The transmission takes place via television satellites (transponders). A request for desired information by the user takes place as usual via a telephone line.

Many users cannot use telephone lines for making the request, for example when the user is on a ship or is using an aircraft, or also is so far from telephone networks that even UHF or VHF communications systems such as mobile telephony devices cannot be utilized.

SUMMARY OF THE INVENTION

It is **therefore** an object of this invention to provide reception of Internet information via a satellite transmission channel in broadcast operation even for those users who have no opportunity for such a connection to the Internet by line for example, and those who have only limited opportunities of shortwave communication available to them.

This object is achieved according to principles of the invention in that users are connected to the Internet via a shortwave radio path on which data are transmitted according to the known TCP/IP protocol.

The invention takes advantage of the knowledge that such shortwave radio paths in a range of, for example, 1.5 to 30 MHZ can be used over vast distances on the entire globe. Such shortwave radio connections, in contrast to wire telephone lines or mobile telephony connections working in the VHF/UHF frequency range, are often unstable, provide very low transfer rates (< 3 Kbit/s) and are most commonly operated in simplex mode. Use of the internationally standardized TCP/IP protocol currently used for data transmission in worldwide communications networks, such as the Internet, which operates in full duplex mode and, as is described for example in the book "Internetworking With TCP/IP" by Douglas E. Comer, Prentice Hall, Englewood Cliffs, New Jersey 07632, has so far been withheld from the shortwave transmission medium. For the purpose of this invention, this TCP/IP protocol is modified and adapted so that it can also be used for the chronologically sequential alternating, forward and backward connection, common in the shortwave range. Such a shortwave connection transmitting data according to the TCP/IP protocol is therefore also suitable for requesting data on the Internet. An Internet user on a ship who has a shortwave transmitter/receiver device with these properties can, therefore, at any time, for example from an Internet provider, request a specific Internet content via his shortwave connection, and this will then be directly transmitted to him via a wideband satellite transmission channel. Although such shortwave radio

connections are relatively narrowband, the opportunity is hereby provided for the first time for even users who do not have any opportunity for a wire connection to an Internet service provider to make use of the possibility of an Internet information transmission with high transfer rates via a satellite transmission channel.

~~The invention is described in further detail below with reference to a schematic drawing,~~ **Further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.**

~~based on an exemplary embodiment.~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention will become more fully understood from the detailed description given hereinbelow and the accompanying drawings which are given by way of illustration only, and thus, are not limitive of the present invention, and wherein:

The figure is an illustration of a data transmission system according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The figure shows an Internet service provider 1 that makes available content from the Internet 2 via a satellite transmission path 3, 4, 5 to various users A and B, at a high transmission rate. A suitable decoder 7 is provided in a computer 6 of each user. The data transmission via the satellite transmission path takes place according to the TCP/IP protocol.

At each user station A and B, a shortwave transmitter/receiver 8 is provided that is connected with a shortwave transmitter/receiver station 9 of a base station Z having Internet access. Suitable shortwave devices 8 and 9 are the XK2000 devices of Rohde & Schwarz, as described, for example, in the data sheet "HF Transceiver Family XK2000". The computers 6 and 10 that control the devices 8 and 9 provide a control program that corresponds to the TCP/IP protocol and is adapted only to the special requirements of a shortwave connection. Thus, the shortwave connection between the devices 8 and 9 functions, exactly as does the satellite transmission path, according to the TCP/IP protocol, and is thus directly suitable for access from stations A and B to the Internet 2, via Z.

Rather than transmitting large quantities of data over the base station Z via shortwave to the user station A and/or B, this information can be deposited for the user in a so-called mailbox on the Internet. The user stations A and/or B can load this data to their computers via the rapid satellite connection. Both notification of the user stations A and/or B of the deposited message and request for the deposited information on the Internet take place via the shortwave medium.

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and scope of the invention, and all such modifications as would be obvious to one skilled in the art are to be included within the scope of the following claims.

What is claimed is: ~~Patent Claim~~

ABSTRACT

The invention concerns a system for transmitting data to a user-requester, via a wideband satellite transmission channel. In the system, the users requesting data are connected to a base station via a short-wave radio channel transmitting data according to the TCP/IP protocol.